



DEFENSE LOGISTICS AGENCY

DLA Land and Maritime
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11 July 2016

MEMORANDUM FOR MILITARY/INDUSTRY DISTRIBUTION

SUBJECT: Initial Draft of MIL-DTL-83725/15C.
Project number 5945-2016-039.

The draft of the above subject document is being sent to you for review and comments. The draft consists of the following changes:

Revised document to include the following changes: convert to detail specification, insert QR Code, update Advisory Note to include current ASSIST URL.

If the document is of interest to you, please provide your comments electronically. This can be in the form of a return e-mail, with or without an attached text file. A 30-day coordination cycle from the date of this letter has been allotted. Please provide your comments within that time period. If no comments are received in the allotted 30 day coordination cycle, concurrence is assumed and all comments received after will be held to the first amendment. Since Navy-EC is a custodian for this document; all Navy review activities should forward their comments directly to this Center. If an electronic response is not possible we will still accept comments via letter, facsimile or phone call but only after you have contacted the project officer listed below. The draft document can be found at the following DLA LAND AND MARITIME-VA web page:

<http://www.landandmaritime.dla.mil/Programs/MilSpec/initialdrafts.aspx>

This process still requires military departments to identify their comments as "Essential" or "Suggested". Essential comments must be justified with supporting data. Military review activities should forward comments to their custodians or this office, as applicable, in sufficient time to allow for consolidating the department reply.

If there are any questions, please contact Erika Baker by the preferred method of E-Mail at Erika.Baker@dla.mil or by telephone at commercial 614-692-4481, DSN 850-4481; or by facsimile at 614-692-6939. Our mailing address as a last resort is DLA Land and Maritime-VAT, P.O. Box 3990, Columbus, OH 43218-3990. If you have further questions or concerns you may contact me at Michael.Radecki@dla.mil by telephone at 614-692-0561 or by DSN 850-0561.

/signature/

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Chief
Electronic Components Branch

NOTE: This draft, dated 11 July, 2016 prepared by DLA-CC, has not been approved and is subject to modification. DO NOT USE PRIOR TO APPROVAL. (Project 5945-2016-039)

MIL-DTL-83725/15C
 DRAFT
 SUPERSEDING
 MIL-R-83725/15B(USAF)
 30 September 1983

DETAIL SPECIFICATION SHEET
 RELAYS, VACUUM, SPDT, 75 AMPERES RMS
 15 KILOVOLTS (PEAK) OR DC

This specification is approved for use by the Department of Defense.

The complete requirements for acquiring the relays described herein shall consist of this specification and [MIL-DTL-83725](#).

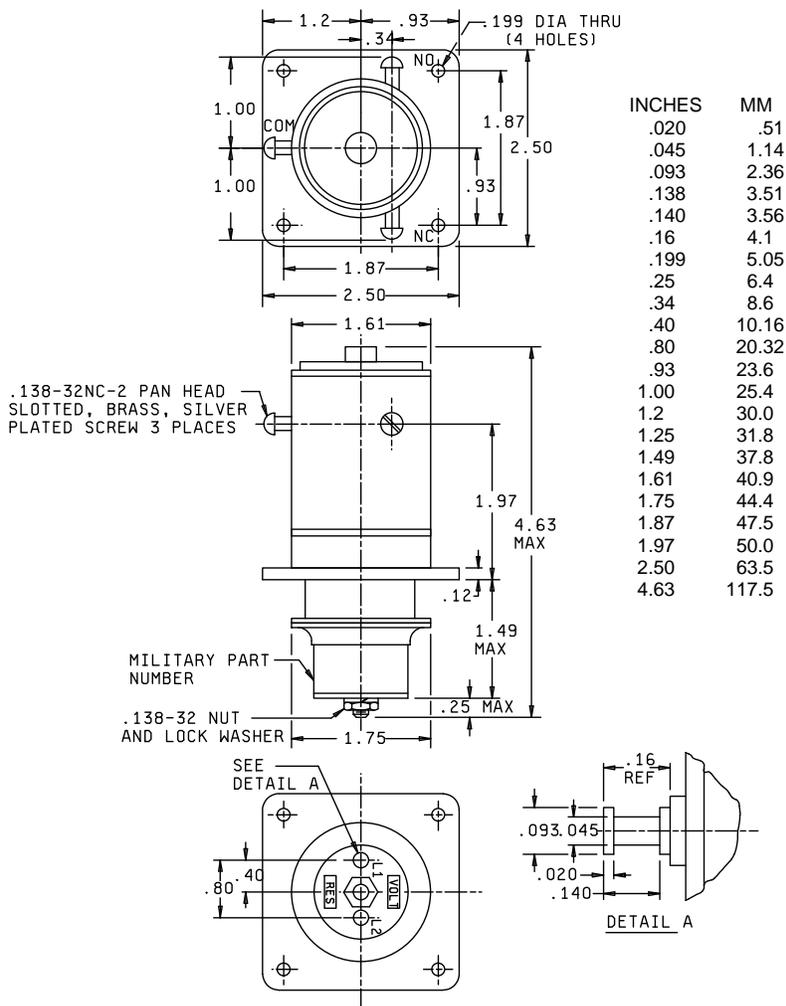
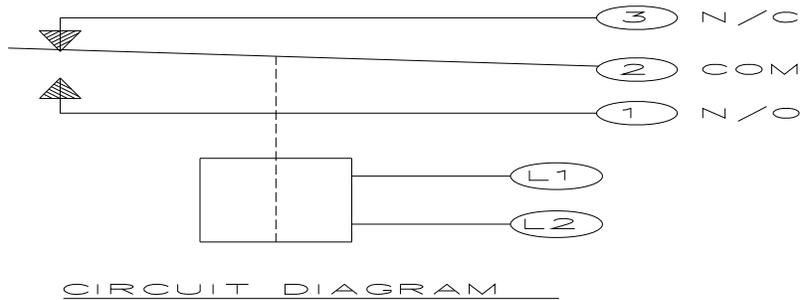


FIGURE 1. Dimensions and configuration.



MIL-DTL-83725/15C
DRAFT DATED 11 July 2016



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only and are based upon 1.00 inch = 25.4 mm.
3. Unless otherwise specified, tolerances are ± 0.010 (0.25 mm) for three place decimals and ± 0.02 (0.5 mm) for two place decimals.
4. Military part number shall be permanently marked on the relay coil housing.
5. N/O, N/C and Com to be stamped on plate below corresponding terminal.

FIGURE 1. Dimensions and configurations - Continued.

REQUIREMENTS:

CONTACT DATA:

Configuration: SPDT, ground isolated.

Arrangement: 1 form C.

Load ratings:

Continuous carry, resistive:

75 amperes r ms, dc or 60 Hz rms.

22 amperes r ms, 2.5 MHz.

15 amperes r ms, 16 MHz.

Make and break resistive:

9 kilovolts or 5 amps dc or 60 Hz maximum.

45 kilowatts maximum.

Voltage ratings, (continuous):

15 kilovolts peak, dc or 60 Hz.

13 kilovolts peak, 2.5 MHz.

10 kilovolts peak, 16 MHz.

Contact resistance:

Rated Life:

Before: .012 ohm, maximum.

During: .10 ohm, maximum.

After: .10 ohm, maximum.

Capacitance:

1.8 picofarads, maximum across open contacts.

1.5 picofarads, maximum between open contacts and ground.

COIL DATA:

Duty rating: Continuous.

Coil voltage: See [table I](#).

Pickup voltage: See [table I](#).

Dropout voltage: See [table I](#).

Coil resistance: See [table I](#).

Operate time: 30 milliseconds, maximum.

Release time: 10 milliseconds, maximum.

MIL-DTL-83725/15C
DRAFT DATED 11 July 2016

ELECTRICAL DATA:

Insulation resistance: 1,000 megohms, minimum, except the resistance between coil and housing at high temperature shall be 500 megohms or greater.

Dielectric withstanding voltage at atmospheric pressure:

Between all mated contacts in the open position, 20 kilovolts peak, 60 Hz or dc.

Between high voltage terminals and housing 20 kilovolts, 60 peak Hz or dc.

Between coil and housing: 500 V rms, 60 Hz.

ENVIRONMENTAL DATA:

Temperature range: -55°C to +125°C.

Shock: MIL-STD-202-213, test condition J.

PHYSICAL:

Terminal strength: 5 pounds pull.

Dimensions and configuration: See figure 1.

Terminations: Screw

Weight: 16 ounces, maximum.

LIFE TEST REQUIREMENTS:

Load life: 20,000 cycles, 2 sample units, maximum cycling rate 20 per minute 9 kilowatts dc and 5 amperes dc make and break resistive. After test common to base, resistance shall be 500 megohms minimum.

Mechanical cycling: 100,000 cycles, 2 sample units (maximum cycling rate, 36,000 per hour; contact current shall not exceed 10 milliamperes).

QUALITY ASSURANCE:

Dielectric withstanding voltage:

Tests to be conducted at atmospheric pressure rating only.

Duration of application: 5-10 seconds at a 10 percent increase in the dielectric withstanding voltage.

Part number: See table I.

TABLE I. Part number and characteristics.

Military part number	Coil voltage V dc	Pick up voltage V dc max	Dropout voltage V dc	Coil resistance ±10%
M83725/13-001	6	4	.2 -2.7	12
M83725/13-002	12	9	.5 - 5.8	52
M83725/13-003	26.5	16	1 - 10	225
M83725/13-004	48	33	1 - 20	735
M83725/13-005	115	70	2 - 40	3900

MIL-DTL-83725/15C
DRAFT DATED 11 July 2016

Changes from previous issue. The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the previous issue.

Referenced documents. In addition to [MIL-DTL-83725](#), this document references the following:

[MIL-STD-202-213](#)

Custodians:
Air Force – 85
DLA - CC

Preparing activity:
DLA-CC

Review activity:
Air Force - 99

(Project 5945-2016-039)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil/>.